

TIPS FOR FUEL EFFICIENCY

As the price of gasoline continues to rise, there are ways we can increase the fuel efficiency of our vehicles, but the best way to improve our miles per gallon begins with us. See how much you can save based on the make and model of your vehicle using these and other tips at the Alliance to Save Energy's "Drive \$marter Challenge" at <http://www.drivesmarterchallenge.org>.



When Filling up:

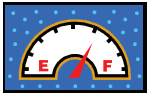
- Choose the right octane gas for your car. Check the owner's manual to find out what octane your engine needs. Only about six percent of the cars sold in the U.S. need premium gas.
- Avoid topping off your gas tank. The fuel needs room to expand. If you top off your tank, the extra gas may evaporate into your vehicle's vapor collection system. That system may become fouled and will not work properly causing your vehicle to run poorly and have high gas emissions. Try filling up only half way. Depending on your tank size, your car will have 50-100 pounds less to haul all the time.
- Shop for the best gas price in your area before filling up. You can search online at <http://gasprices.mapquest.com>.



Before Heading Out:

- Only allow your car to warm up for 30 seconds in the winter. A warm engine is more fuel efficient than a cold one. However, idling your engine too long wastes fuel.
- Keep your tires inflated to the proper level. Properly inflated tires provide less road resistance and can improve fuel efficiency by three to five percent. It can also increase the life of your tires. Check your owner's manual for appropriate inflation levels. This information may also be available on the jamb of the driver's side door.
- Remove any bicycle or luggage racks in between trips, and do not fly any flags from your car or windows. Avoid packing items on top of the car. A loaded roof rack or carrier creates wind resistance and can decrease fuel economy by five percent. Carry the load inside your vehicle if you can.
- If you have several cars, use the one with the best gas mileage for daily commuting.
- Watch for tread wear on your tires by checking the wear patterns and tread levels frequently. Have the tires rotated at least every 6,000 miles. Keeping your car properly aligned can also reduce your fuel bill by three percent and extend the life of your tires.
- Get regular engine tune-ups and car maintenance checks to avoid fuel economy problems due to worn spark plugs, dragging brakes, low transmission fluid, or transmission problems. You can increase your fuel economy by four percent.
- Perform regular oil changes. Clean oil reduces friction in the engine allowing the different parts to move freely. Running an engine with old, dirty oil is like having liquid sandpaper in your engine. You can improve your gas mileage by one to two percent.

- Clean or replace the air filter regularly. The longer an air filter remains in the engine without cleaning or replacement, the more clogged with contaminants the filter becomes. The filter contaminants require the engine to work harder to bring sufficient air into the engine. Replacing clogged air filters can improve gas mileage by as much as 10 percent and protect your engine.
- Lighten your load. An extra 100 pounds in the trunk reduces a typical car's fuel economy by one to two percent.



While on the Road:

- Stay within posted speed limits. Driving at high speeds, especially for long distances, uses more gasoline. Each five miles per hour (mph) you drive over 60 mph reduces fuel efficiency by about 10 percent.
- If you aren't driving on hilly terrain, use cruise control. It helps maintain a constant speed and, in most cases, can produce savings of up to 14 percent.
- Aggressive driving (speeding, rapid acceleration, and hard braking) wastes gas. It can lower your highway gas mileage 33 percent and city mileage five percent.
- Anticipate traffic situations. Anticipating traffic situations minimizes excessive and unnecessary acceleration and deceleration.
- Avoid unnecessary idling. Plan your trips to avoid congested, high-traffic areas and stop-and-go driving. If you're stopped in traffic for more than two minutes, turn your vehicle off. Avoiding excessive idling can save up to 19 percent.
- Avoid riding the brakes. Lightly pressing the brake while driving wastes energy through friction in the brakes.
- Turn off the air-conditioner. Using the air-conditioner increases fuel cost from 13 percent up to 21 percent. If it's cool enough, use the flow-through ventilation instead of rolling down the windows or using the A/C.
- Use the landscape to your advantage. Let your car accelerate down the hill, so its inertia will help it climb up the next hill, and let the speed decrease slightly while you are going up.
- Use overdrive gears when on the highway. Overdrive decreases the car's engine speed, reducing fuel consumption and engine wear.
- Combine errands to avoid making several short trips. Short trips of five miles or less can decrease fuel efficiency.
- Carpool, vanpool, walk or ride a bike when possible.



Your Next Vehicle:

- Car manufacturers are developing models that get better gas mileage and have very low emissions. Evaluate your transportation needs and then research your options to find a car that will save you money and keep the air cleaner.

- **Vehicle Size:** Choose the smallest, lightest vehicle possible to maximize fuel economy. Larger, heavier vehicles, such as SUVs require more power to overcome rolling friction and aerodynamic forces.
 - **Engine Size:** While not always the case; vehicles with smaller displacement engines are generally more economical, simply because they usually weigh less than vehicles with larger displacement engines.
 - **Manual versus Automatic Transmissions:** Automatic transmissions require components called torque-converters, which are very inefficient at low vehicle speeds. Consequently, a vehicle with a manual transmission will have better fuel economy than the same model vehicle with an automatic transmission.
 - **Hybrid Vehicles:** Hybrid vehicles use a combination of a traditional combustion engine and an electric motor with battery pack. Hybrid vehicles use the energy stored in the battery pack to run the electric motor when the combustion engine is least efficient, which improves overall fuel economy.
 - **Alternate Fuels:** Alternatives to gasoline such as natural gas, propane, ethanol, and bio-diesel are becoming more available. The use of alternative fuels reduces the demand for gasoline and increases competition, which consequently checks fuel prices for everyone. Ethanol and bio-diesel are called “green” fuels because they are made from sustainable sources such as agricultural wastes and help reduce the amount of carbon dioxide added to the atmosphere.
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For more information on these and other energy-saving tips, contact the Energy Division of the Alabama Department of Economic and Community Affairs at (334) 242-5290.



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